

# Protective Stop Control Belt Misalignment Switch

## Installation, Design, Setting Instruction and Technical Document

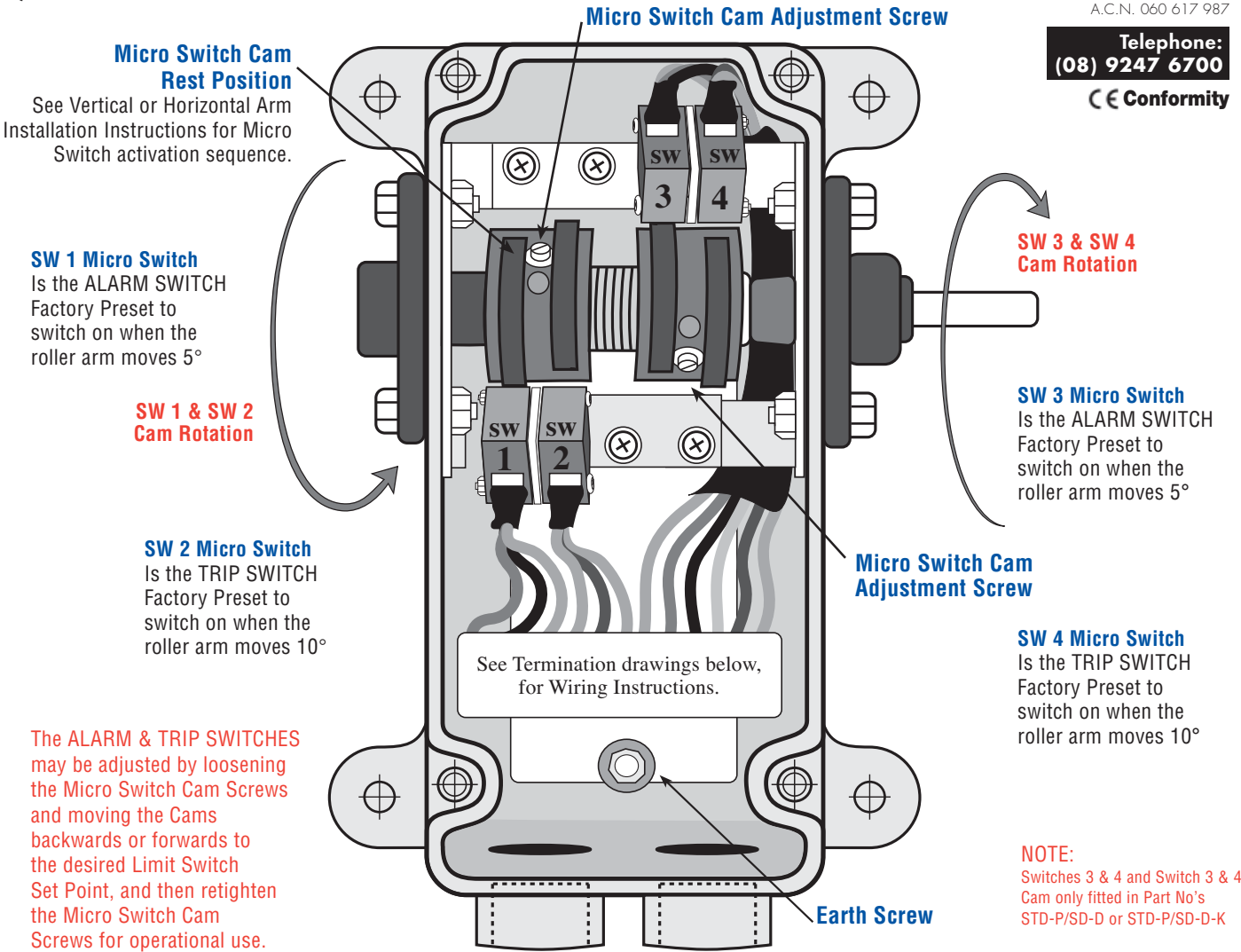


PRODUCTS  
A.C.N. 060 617 987

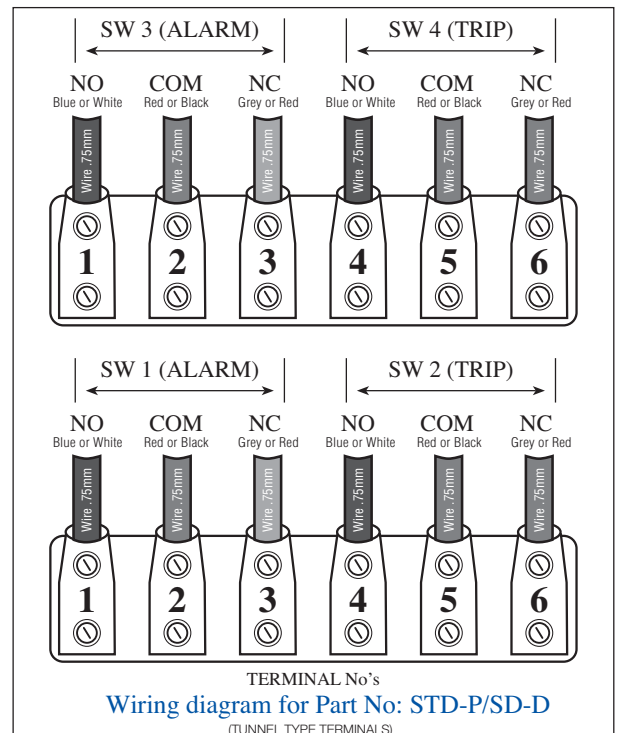
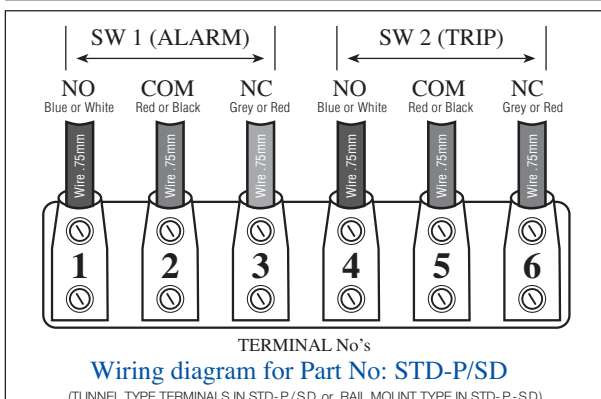
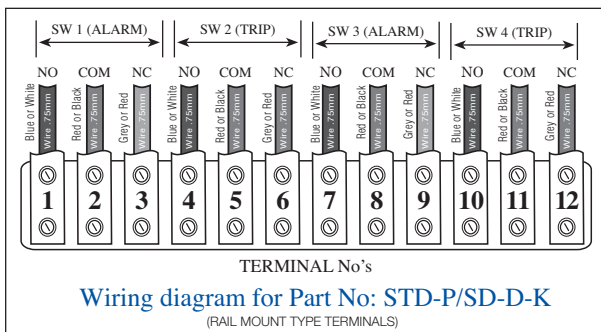
Telephone:  
**(08) 9247 6700**

CE Conformity

P/No's: STD-P STD-SD



**NOTE:**  
Switches 3 & 4 and Switch 3 & 4 Cam only fitted in Part No's STD-P/SD-D or STD-P/SD-D-K

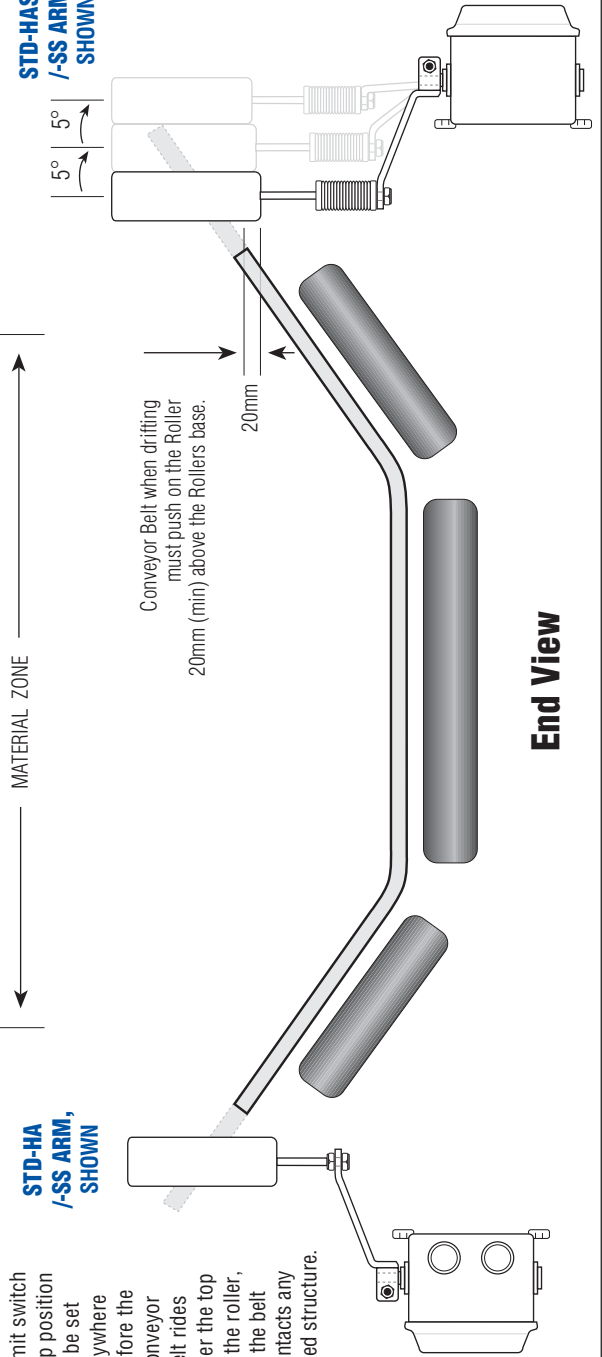


## Top View



Limit switch trip position to be set anywhere before the Conveyor Belt rides over the top of the roller, or the belt contacts any fixed structure.

**STD-HA /-SS ARM, SHOWN**



# HORIZONTAL ARM

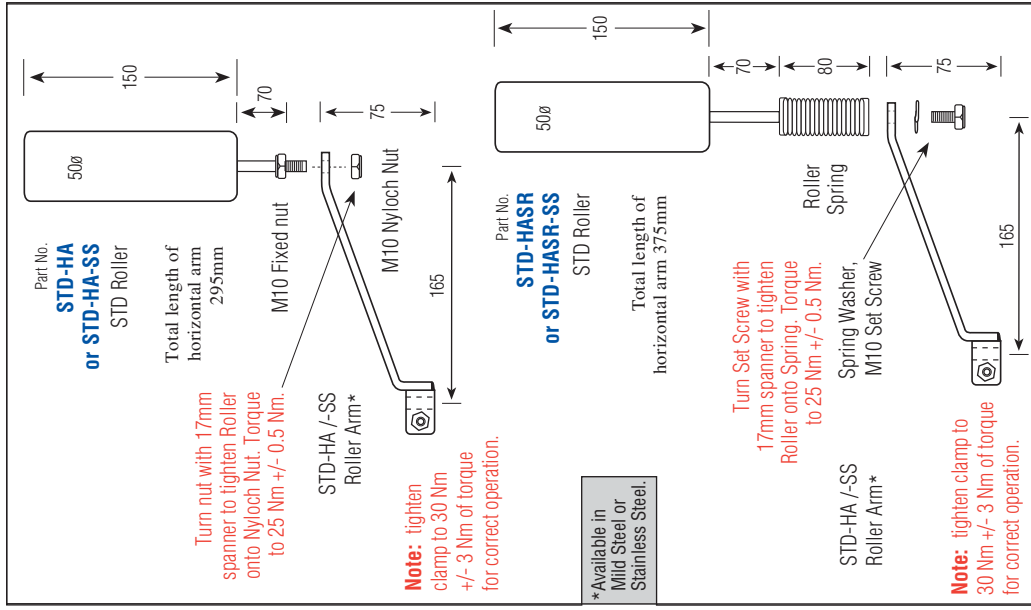
Part No's: STD-HA /SS; STD-HASR /SS;

## Arm Installation Instructions

HA Rollers are used for large items on conveyor

Recommended Belt Drift Switches to use with STD - HA/SS or HASR/SS

Part No's: STD - P/SD - D / - ..... STD - P/SD - D - K / - ..... ?

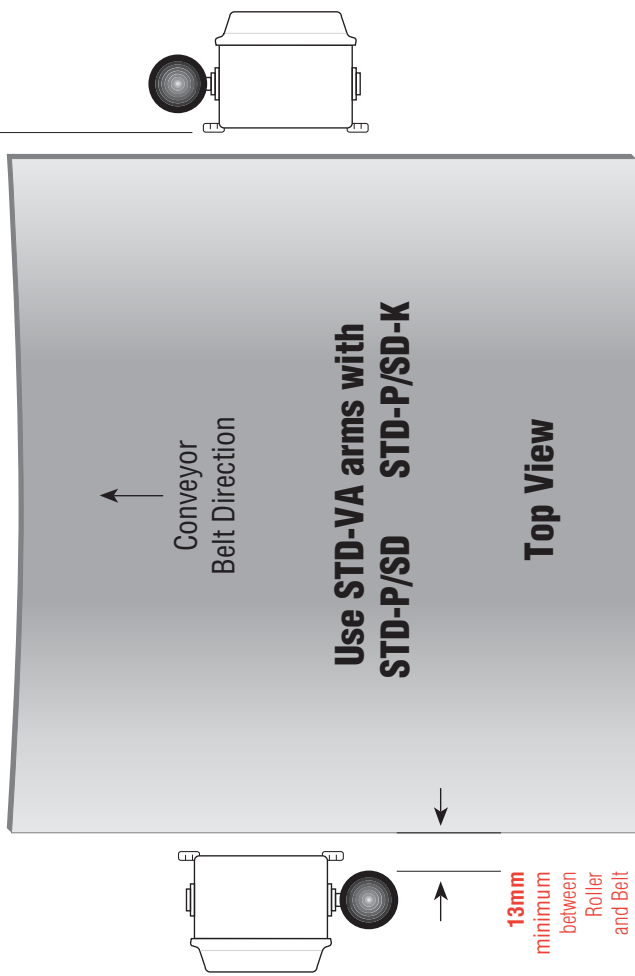


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7mm minimum from the belt edge to the under side of the Switch



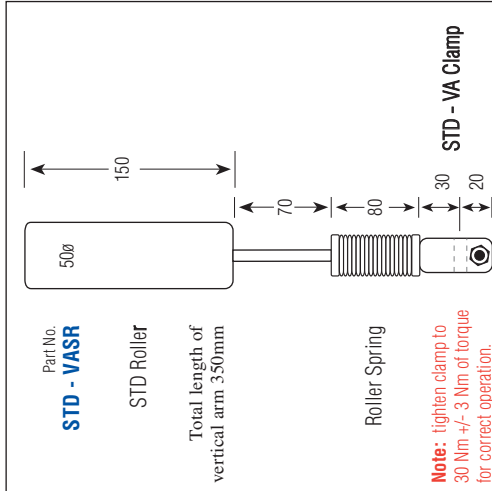
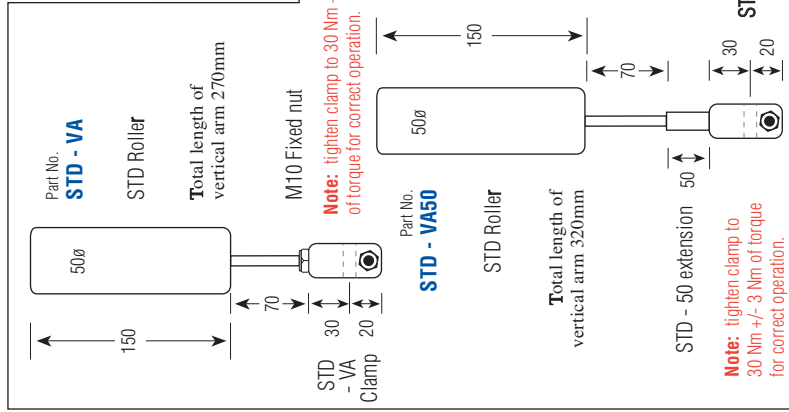
## VERTICAL ARM

Part No's: STD-VA; STD-VASR; STD-VA50

### Arm Installation Instructions

Recommended Belt Drift Switches to use with STD-VA / VASR / VA50

Part No's: STD-P/SD - ? ..... STD-P/SD - K - ? .....



The roller arm has the ability to rotate 90° from its set resting position in both directions, so that you can get maximum belt drift travel and maintain switch & roller reliability. The arm returns to its set resting position when the belt returns to its normal running position.

Using the Part No. STD-P/SD-LATCH the arm can be preset to a position where the belt drifts and trips the switch, and the arm rotates over to the 90 position and only returns when it is physically pushed back to position and then the conveyor may be restarted.

Eg. Use the roller arm as a Belt Drift Switch visual flag indicator

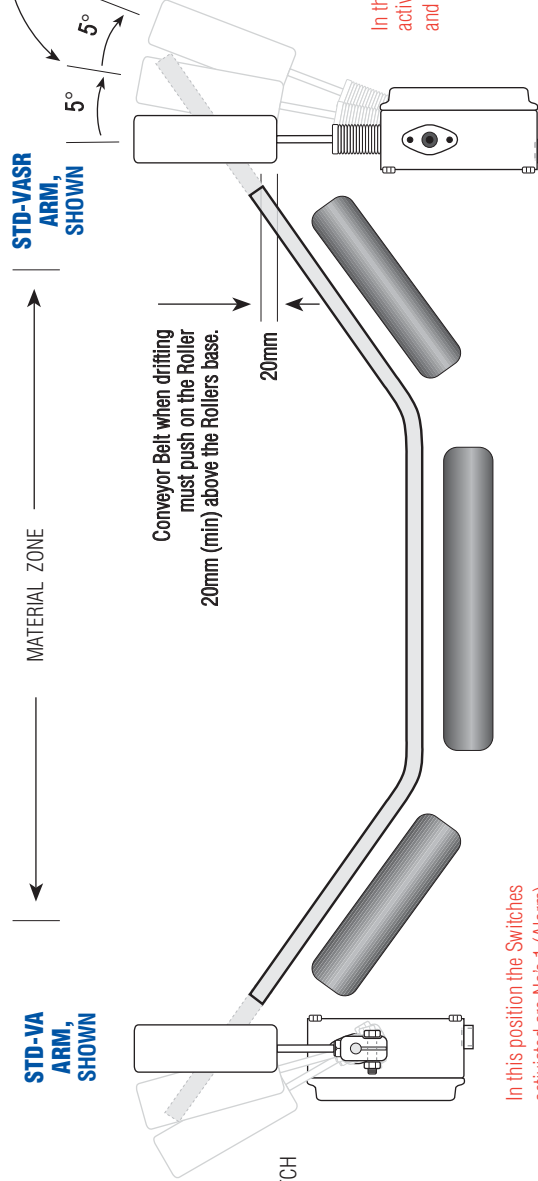
**STD-VA ARM, SHOWN**      **STD-VASR ARM, SHOWN**

**FACTORY SET LIMIT SWITCH ALARM POSITION (ALARM LIMIT SWITCH ON)**  
(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

**FACTORY SET LIMIT SWITCH TRIP POSITION (TRIP LIMIT SWITCH ON)**  
(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

Limit switch trip position to be set anywhere before the Conveyor Belt rides over the top of the roller, or the belt contacts any fixed structure.

In this position the Switches activated are No's 1 (Alarm) and 2 (Trip)



### End View



P/No's: STD-P STD-SD



## Standards

The **SAFE-T-DRIFT** complies with the relevant parts of these Standards:

|                       |  |
|-----------------------|--|
| IEC 60947-5-1 ED. 4.0 | Control circuit devices & switching elements |
| AS 60947.5.1:2015     | Control circuit devices & switching elements |
| AS4024.1-2014         | Safety of machinery                          |
| AS4024.3610-2015      | Safety of machinery                          |
| AS4024.3612-2015      | Safety of machinery                          |

### Ce Conformity to:

|           |                       |
|-----------|-----------------------|
| 98/37/EEC | Machinery Directive   |
| 73/23/EEC | Low Voltage Directive |

## Workshop Tested

All switches are tested by trained personnel before leaving ELECTRIC CONTROL PRODUCTS and have a date & name label of manufacture so that all relevant Standards are complied with and the product is in a full working order.

## Modifications of Switch

Any modifications are **ONLY** to be made by ELECTRIC CONTROL PRODUCTS or one of their registered repairers. Any unauthorised modifications may not comply with the relevant standards and may diminish the integrity and workings of the switch and the warranty will become void.

ELECTRIC CONTROL PRODUCTS and their registered repairers or distributors will not be responsible for any damage caused to the altered switch or any item in, on, related or near the switch, nor any injury incurred, nor actions resulting from the unauthorised alterations.

## Returns Policy/ Re Stocking

Please return any defective switch to place of purchase for assessment. If they are deemed to be warranty repairs or not. Return warranty switches as per warranty clause. Restocking returns will only be accepted if received by ELECTRIC CONTROL PRODUCTS in their original condition and within thirty (30) days of delivery date stated on delivery documentation. A restocking fee applies (contact place of purchase for costs).

## Warranty

Electric Control Products of 18 Tambrey Way, Malaga 6090 Perth Western Australia contact telephone: (08) 9247 6700 or [info@safe-t-products.com.au](mailto:info@safe-t-products.com.au) warranty period is **twenty four (24) months** from date of purchase or longer if indicated by Electric Control Products. For warranty to be valid the goods must be received by Electric Control Products before the end of the twenty four (24) month period. Electric Control Products warrants that if any product is defective, it will, at its option, replace or repair the product. **This warranty shall not apply to any defect which arises from improper use, failure to follow the products instruction, or any repair or modification made without the consent of Electric Control Products.**

The customer must contact the Distributor of the product or Electric Control Products of 18 Tambrey Way, Malaga 6090 Perth Western Australia via telephone contact (08) 9247 6700 or Email [info@safe-t-products.com.au](mailto:info@safe-t-products.com.au) before returning the faulty product. If returned they must be suitably packaged and, where relevant, returned in accordance with any particular instructions which Electric Control Products or one of its distributors may have notified the customer at the time of contact for warranty. **Returned products must be accompanied by an advice note stating the nature of any defect being claimed.** Any products or parts which are replaced by Electric Control Products or one of its distributors shall become the property of Electric Control Products. **Title to replacement products shall pass to the customer on delivery, and the period of the warranty shall be calculated from the date of the defective product.**

All warranty returns to Electric Control Products will be sent by the customer's freight at their cost. All benefits under this warranty are in addition to other rights and remedies of the consumer under a law in relation to the goods or services to which the warranty relates. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## Maintenance Procedure

All **SAFE-T-DRIFT** switches require minimal maintenance but as in AS/NZS 4024.1:2014 a maintenance procedure **must** be carried out.

### Recommended 6 Month Maintenance

1. Visual inspection of enclosure to ensure IP rating and correctly operating device. i.e. Damaged enclosure, bent actuator rod, damaged dust boot, damaged roller etc.
2. Activate the **SAFE-T-DRIFT** switch via the roller making sure it moves freely and returns to its set position (Note: STD-LATCH won't return until pushed).
3. Inspect roller for wear or deterioration and replace if necessary.
4. After inspection, check the set position of the switch as per installation instructions.

### Full Safety Maintenance every 12 Months

Remove cover & check for corrosion or water ingress. Replace if necessary.

Check electrical connections for security and corrosion.

Clean lid seal and replace cover & torque down lid screws as per micro switch installation sheet.

### All Plastic products

Product life expectancy

Electric Control Products **estimate** the product life expectancy to 10-15 years

A shorter or longer product life may be experienced due to environmental situations.

Electric Control Products can't give a written life expectancy on any of its products due to the different situations the products are used.

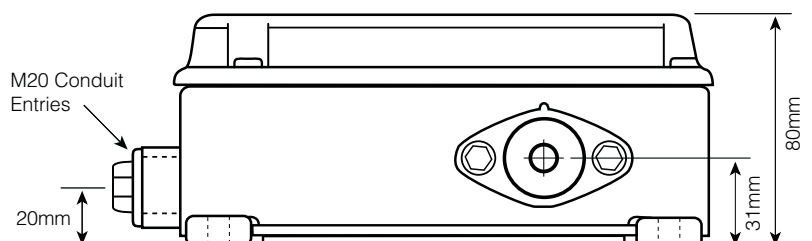
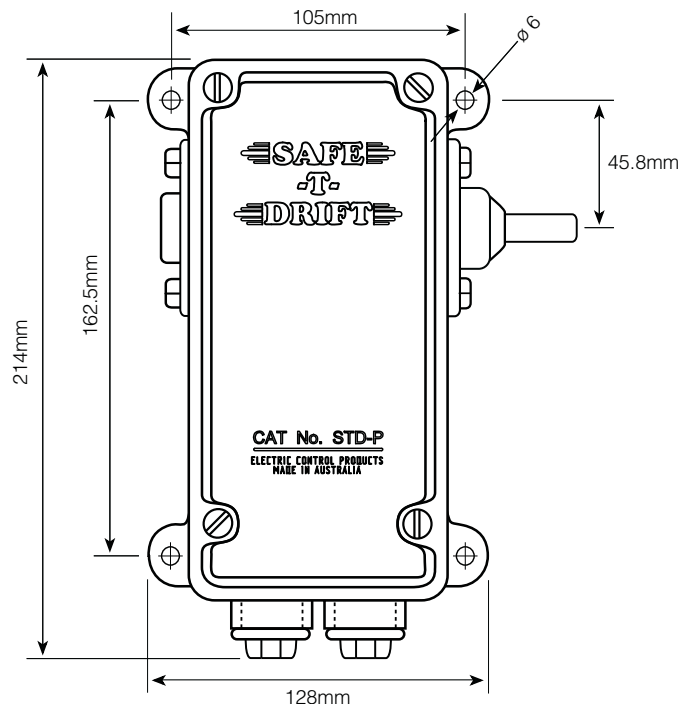
### Technical Support

Technical advice will be given at any time by Electric Control Products or distributor on any of the Electric Control Product range. Contact Electric Control Products or your local distributor for this service.

### Obsolete Products

Notification will be given to distributors only for the products becoming obsolete and a time frame of when this will occur. Please contact distributor for this information.

The obsolete product range will have spare parts for 12 months after becoming obsolete, or until run out, complete products will be available for a short time after it has become obsolete.

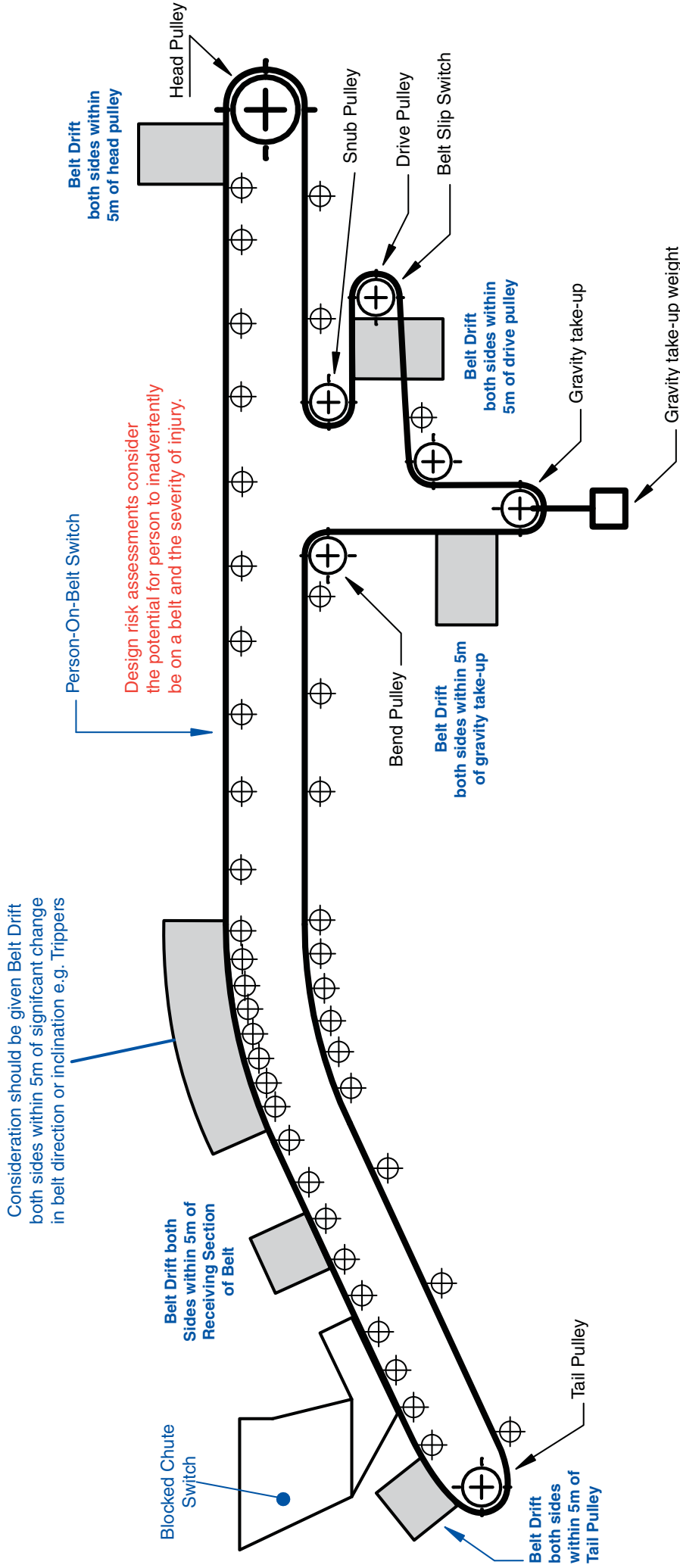


**Safety Micro Switch with Direct Opening Action Specifications:** Tested to IEC 60947-5-1

|                                      |                                       |   |
|--------------------------------------|---------------------------------------|---|
| IEC 60947-5-1 Annex K classification | <input type="checkbox"/> Type 1       | <input checked="" type="checkbox"/> Type 2 Direct Opening |
| Change-over contact element          | <input checked="" type="checkbox"/> C | <input type="checkbox"/> Za <input type="checkbox"/> Zb   |
| Contact material                     | Ag-Ni                                 |   |
| Utilization category                 | AC-15                                 | DC-13   |
| Rated Operational Voltage            | 250V AC                               | 60V DC  |
| Rated Operational Current            | 1.5 Amp AC                            | 0.5 Amp DC  |
| Frequency                            | 50/60 Hz                              | —   |
| Number of electrical cycles          | 6050 (6 min-1)                        |   |
| Number of mechanical cycles          | 6050 (6 min-1)                        |   |
| Short Circuit Protection Device      | Fuse gG                               |   |
| Ratings of SCPD                      | 6A-690 VAC                            |   |

# AS/NZS 4024.3611 Bulk Handling Material Conveyors

## Protective Stop Control Positions



**NOTE:** Belt drift switches are mandatory for underground mines and hazardous areas e.g. confined spaces, reclaim tunnels, underground unloading/loading facility's. Recommended for surface conveyors.

# Protective Stop Control Belt Misalignment Switch

## Installation, Design, Setting Instruction and Technical Document



PRODUCTS  
A.C.N. 060 617 987

Telephone: (08) 9247 6700

CE Conformity

P/No: STD-SSB

### Micro Switch Cam Rest Position

See Vertical or Horizontal Arm Installation Instructions for Micro Switch activation sequence.

### Micro Switch Cam Adjustment Screw

### SW 1 Micro Switch

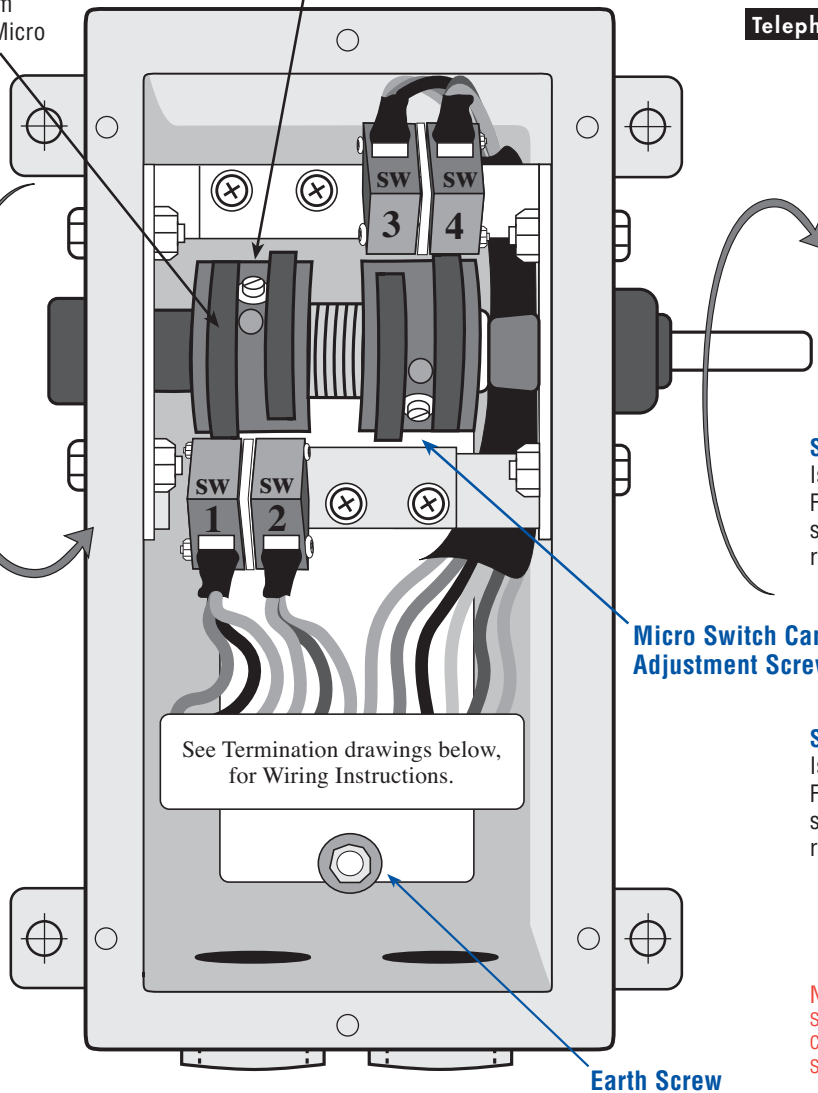
Is the ALARM SWITCH  
Factory Preset to switch on when the roller arm moves 5°

### SW 1 & SW 2 Cam Rotation

### SW 2 Micro Switch

Is the TRIP SWITCH  
Factory Preset to switch on when the roller arm moves 10°

The ALARM & TRIP SWITCHES may be adjusted by loosening the Micro Switch Cam Screws and moving the Cams backwards or forwards to the desired Limit Switch Set Point, and then retighten the Micro Switch Cam Screws for operational use.



### SW 3 & SW 4 Cam Rotation

### SW 3 Micro Switch

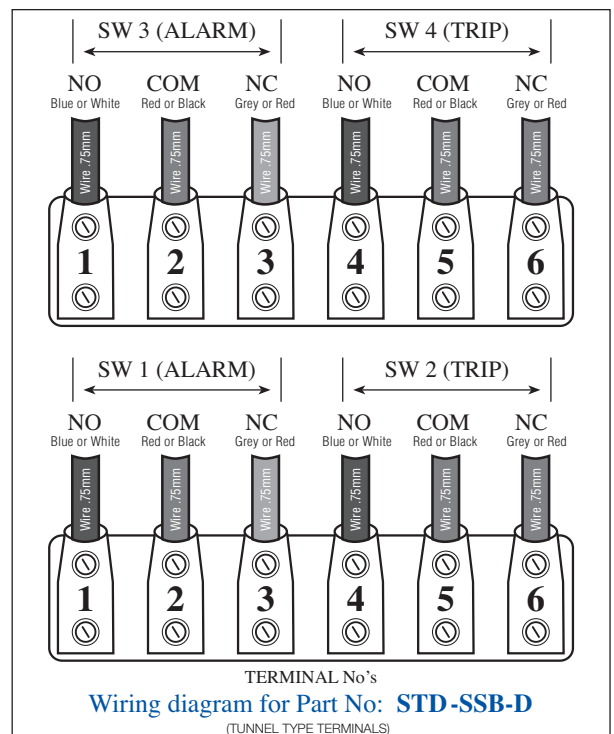
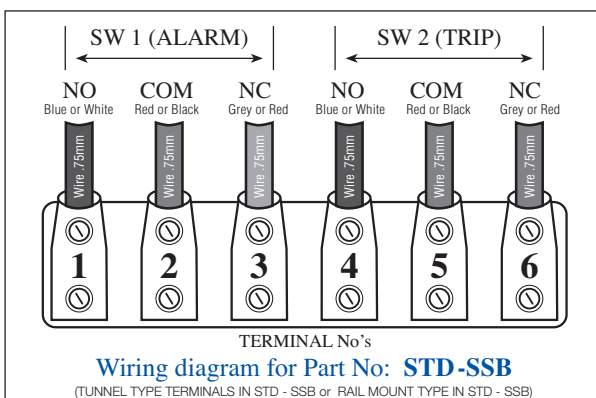
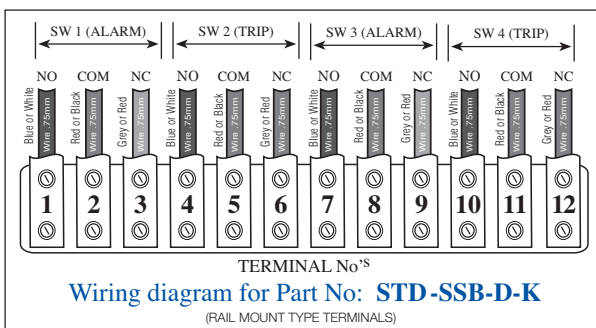
Is the ALARM SWITCH  
Factory Preset to switch on when the roller arm moves 5°

### Micro Switch Cam Adjustment Screw

### SW 4 Micro Switch

Is the TRIP SWITCH  
Factory Preset to switch on when the roller arm moves 10°

**NOTE:**  
Switches 3 & 4 and Switch 3 & 4 Cam only fitted in Part No's STD-SSB-D or STD-SSB-D-K





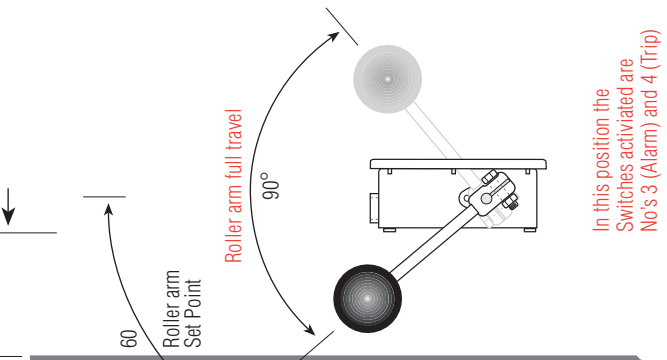
## Top View

**Use STD-HA arms with STD-P-D / STD-P-D-K**

Conveyor Belt Direction

**FACTORY SET LIMIT SWITCH (TRIP LIMIT SWITCH ON)**  
(Factory Setting may be changed after Installation to required position. See Micro Switch Installation Instructions for adjustment)

**FACTORY SET LIMIT SWITCH ALARM POSITION (ALARM LIMIT SWITCH ON)**  
(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)



In this position the Switches activated are No's 1 (Alarm) and 2 (Trip)

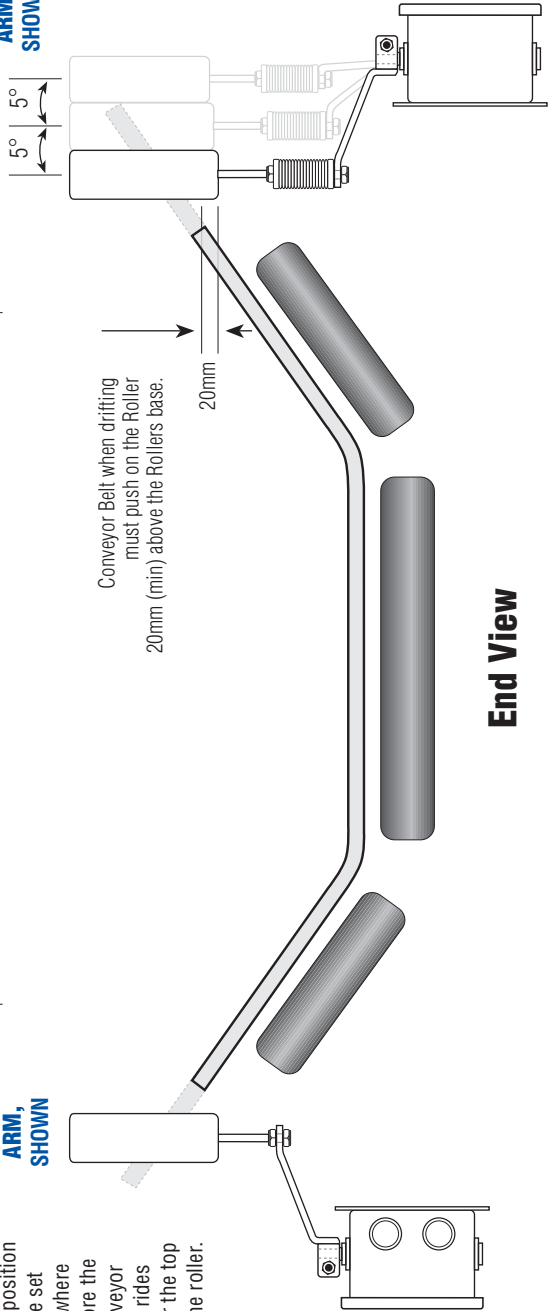
In this position the Switches activated are No's 3 (Alarm) and 4 (Trip)

**STD-HA /-SS ARM, SHOWN**

**STD-HASR /-SS ARM, SHOWN**

MATERIAL ZONE

Conveyor Belt when drifting must push on the Roller 20mm (min) above the Rollers base.



## End View

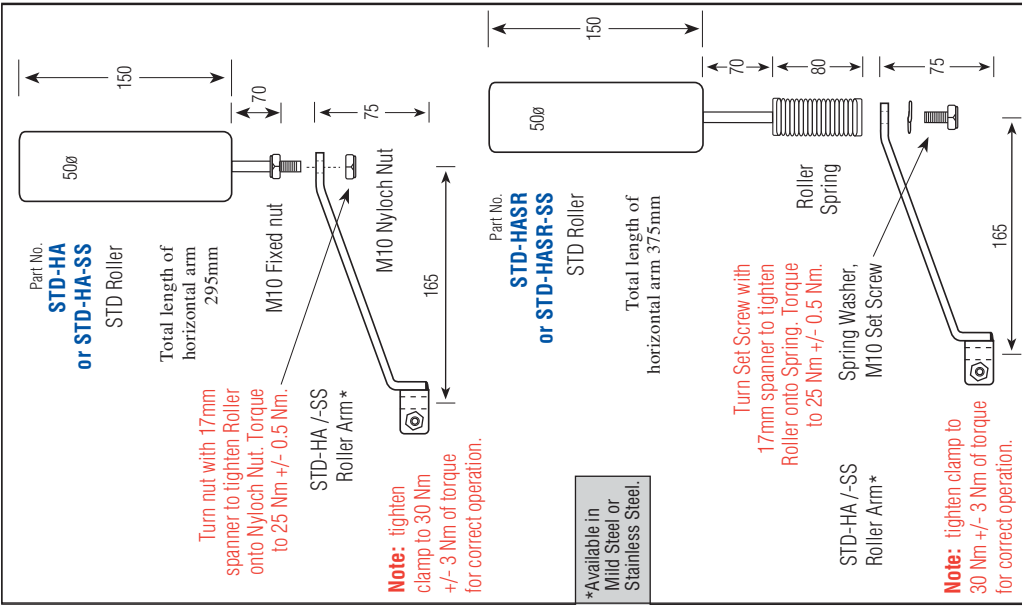
# HORIZONTAL ARM

Part No's: STD-HA /SS; STD-HASR /SS;

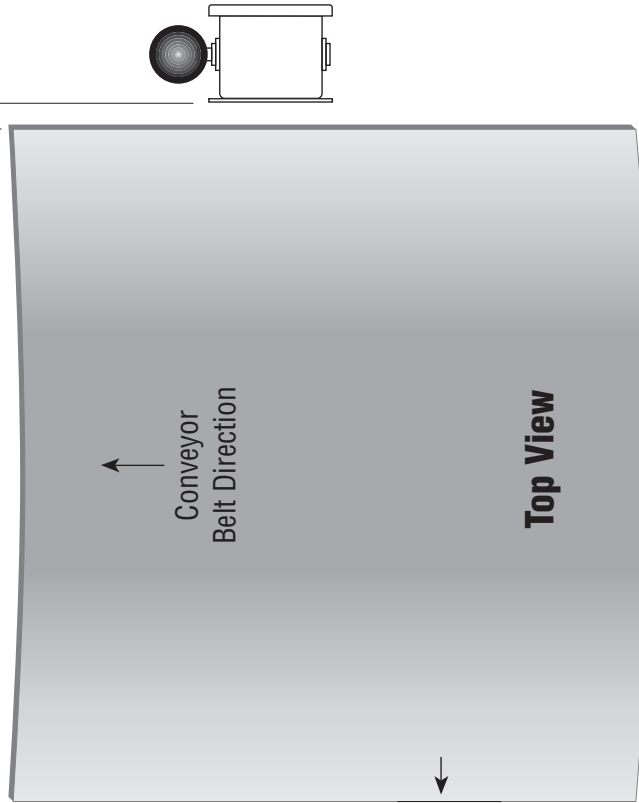
## Arm Installation Instructions

HA Rollers are used for large items on conveyor

Recommended Belt Drift Switches to use with STD - HA/SS or HASR/SS  
Part No's: STD-SSB-D / - ? STD-SSB-D-K / - ?



7mm minimum from the belt edge to the under side of the Switch



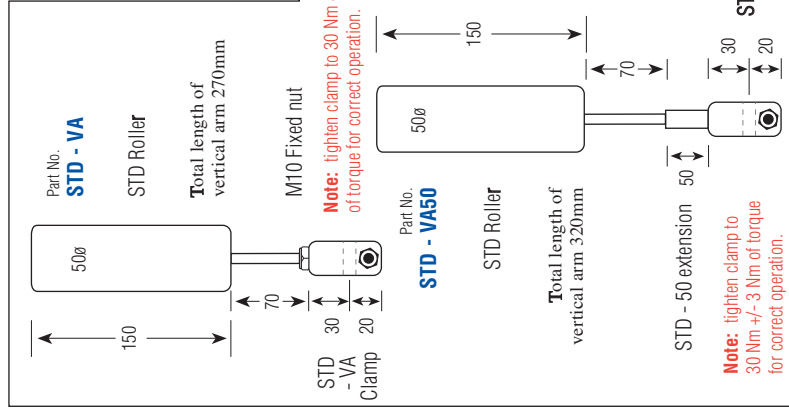
## VERTICAL ARM

Part No's: STD-VA; STD-VASR; STD-VAS50

### Arm Installation Instructions

Recommended Belt Drift Switches to use with STD-VA / VASR /

Part No's: STD-SSB / - ? ..... STD-SSB -K/ - ? .....

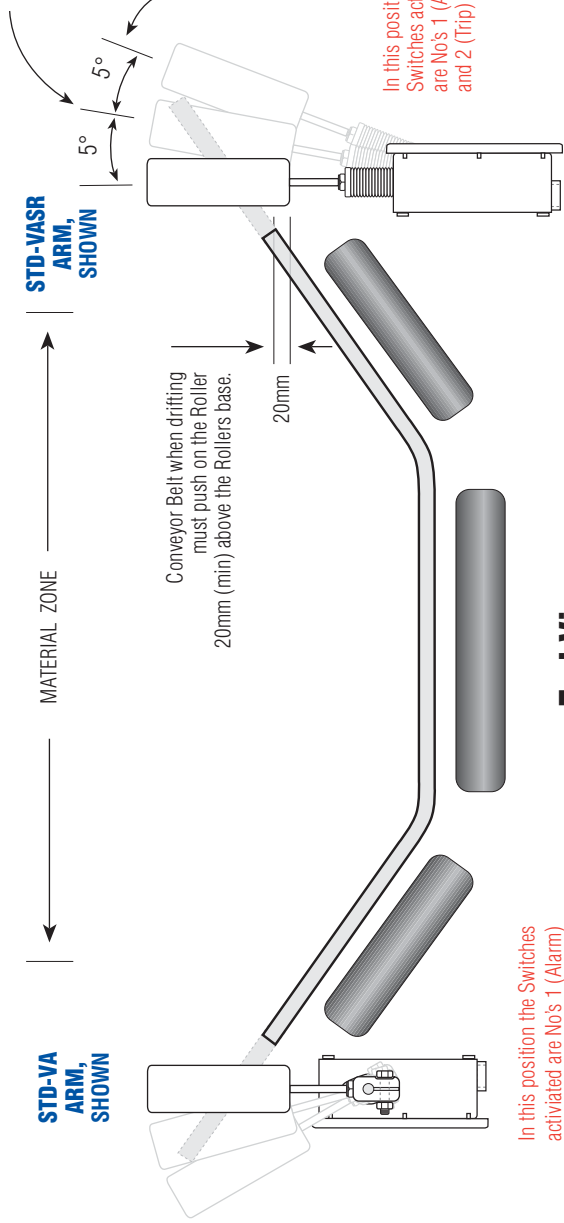


Part No. **STD - VA**  
STD Roller  
Total length of vertical arm 270mm  
M10 Fixed nut  
**Note: tighten clamp to 30 Nm +/- 3 Nm of torque for correct operation.**

Part No. **STD - VASR**  
STD Roller  
Total length of vertical arm 350mm  
Roller Spring  
**Note: tighten clamp to 30 Nm +/- 3 Nm of torque for correct operation.**

The roller arm has the ability to rotate 90° from its set resting position in both directions, so that you can get maximum belt drift travel and maintain switch & roller reliability. The arm returns to its set resting position when the belt returns to its normal running position.

Using the Part No. STD-SSB-LATCH the arm can be preset to a position where the belt drifts and trips the switch, and the arm rotates over to the 90° position and only returns when it is physically pushed back to position and then the conveyor may be restarted. Eg. Use the roller arm as a Belt Drift Switch visual flag indicator.



**FACTORY SET LIMIT SWITCH ALARM POSITION**  
(ALARM LIMIT SWITCH ON)  
(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

**FACTORY SET LIMIT SWITCH TRIP POSITION**  
(TRIP LIMIT SWITCH ON)  
(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

Limit switch trip position to be set anywhere before the Conveyor Belt rides over the top of the roller.

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### End View

**P/N STD - SSB**

## Standards

The **SAFE-T-DRIFT** complies with the relevant parts of these Standards:

|                       |  |
|-----------------------|--|
| IEC 60947-5-1 ED. 4.0 | Control circuit devices & switching elements |
| AS 60947.5.1:2015     | Control circuit devices & switching elements |
| AS4024.1-2014         | Safety of machinery                          |
| AS4024.3610-2015      | Safety of machinery                          |
| AS4024.3612-2015      | Safety of machinery                          |

## Ce Conformity to:

|           |                       |
|-----------|-----------------------|
| 98/37/EEC | Machinery Directive   |
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## Workshop Tested

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## Modifications of Switch

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**P/N STD - SSB**

## Maintenance Procedure

All **SAFE-T-DRIFT** switches require minimal maintenance but as in AS 4024 a maintenance procedure **must** be carried out.

### Recommended 6 Month Maintenance

1. Visual inspection of enclosure to ensure IP rating and correctly operating device. i.e. Damaged enclosure, bent actuator rod, damaged dust boot, damaged roller etc.
2. Activate the **SAFE-T-DRIFT** switch via the roller making sure it moves freely and returns to its set position (Note: STD-LATCH won't return until pushed).
3. Inspect roller for wear or deterioration and replace if necessary.
4. After inspection, check the set position of the switch as per installation instructions.

### Full Safety Maintenance Every 12 Months

Remove cover & check for corrosion or water ingress. Replace if necessary.

Check electrical connections for security and corrosion.

Clean lid seal and replace cover & torque down lid screws as per micro switch installation sheet.

### All Plastic products

Product life expectancy

Electric Control Products **estimate** the product life expectancy to 10-15 years

A shorter or longer product life may be experienced due to environmental situations.

Electric Control Products can't give a written life expectancy on any of its products due to the different situations the products are used.

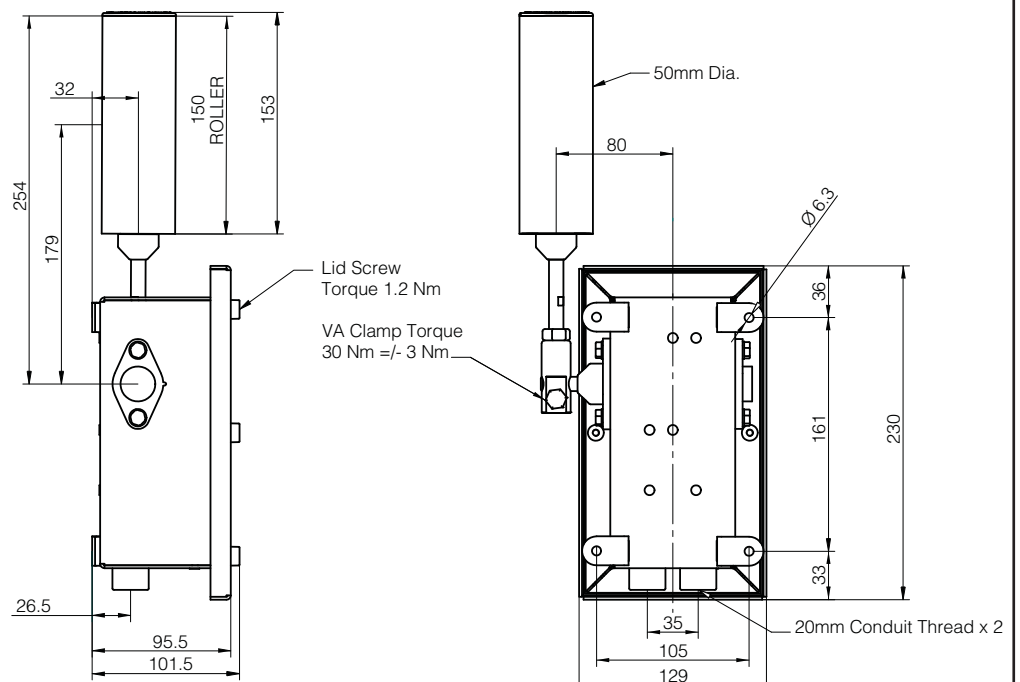
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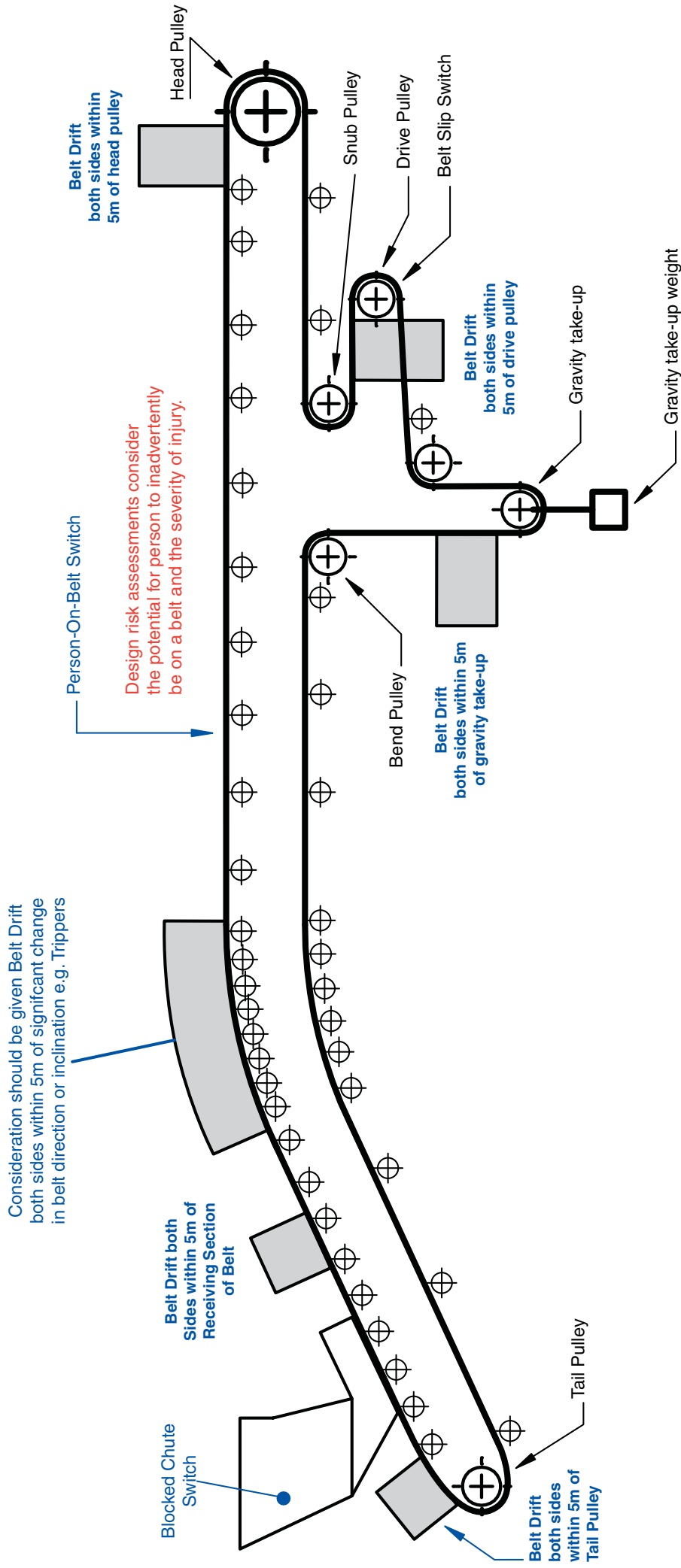
## TECHNICAL SPECIFICATIONS

### Safety Micro Switch with Direct Opening Action Specifications: Tested to IEC 60947-5-1

|                                      |                                       |   |
|--------------------------------------|---------------------------------------|---|
| IEC 60947-5-1 Annex K classification | <input type="checkbox"/> Type 1       | <input checked="" type="checkbox"/> Type 2 Direct Opening |
| Change-over contact element          | <input checked="" type="checkbox"/> C | <input type="checkbox"/> Za <input type="checkbox"/> Zb   |
| Contact material                     | Ag-Ni                                 |   |
| Utilization category                 | AC-15                                 | DC-13   |
| Rated Operational Voltage            | 250V AC                               | 60V DC  |
| Rated Operational Current            | 1.5 Amp AC                            | 0.5 Amp DC  |
| Frequency                            | 50/60 Hz                              | —   |
| Number of electrical cycles          | 6050 (6 min-1)                        |   |
| Number of mechanical cycles          | 6050 (6 min-1)                        |   |
| Short Circuit Protection Device      | Fuse gG                               |   |
| Ratings of SCPD                      | 6A-690 VAC                            |   |

# ASNZS 4024.3611 Bulk Handling Material Conveyors

## Protective Stop Control Positions



**NOTE:** Belt drift switches are mandatory for underground mines and hazardous areas e.g. confined spaces, reclaim tunnels, underground unloading/loading facility's. Recommended for surface conveyors.



# SAFE-T-DRIFT

Top View

**FACTORY SET LIMIT SWITCH TRIP POSITION**

(TRIP LIMIT SWITCH ON)

(Factory Setting may be changed after Switch Installation to required position, See Micro Switch Installation Instructions for adjustment)

(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

**FACTORY SET LIMIT SWITCH ALARM POSITION**

(ALARM LIMIT SWITCH ON)

(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

**Use STD-HA arms with STD-P/SD-D STD-P/SD-D-K**

Conveyor Belt Direction

160mm minimum from the belt edge to the under side of the Switch

60°  
Roller arm Set Point

Roller arm full travel

90°

In this position the Switches activated are No's 3 (Alarm) and 4 (Trip)

6mm minimum between Roller and Belt

Limit switch trip position to be set anywhere before the Conveyor Belt rides over the top of the roller, or the belt contacts any fixed structure.

**STD-HA /-SS ARM, SHOWN**

MATERIAL ZONE

Conveyor Belt when drifting must push on the Roller 20mm (min) above the Rollers base.

20mm

**STD-HASR /-SS ARM, SHOWN**

End View

# HORIZONTAL ARM

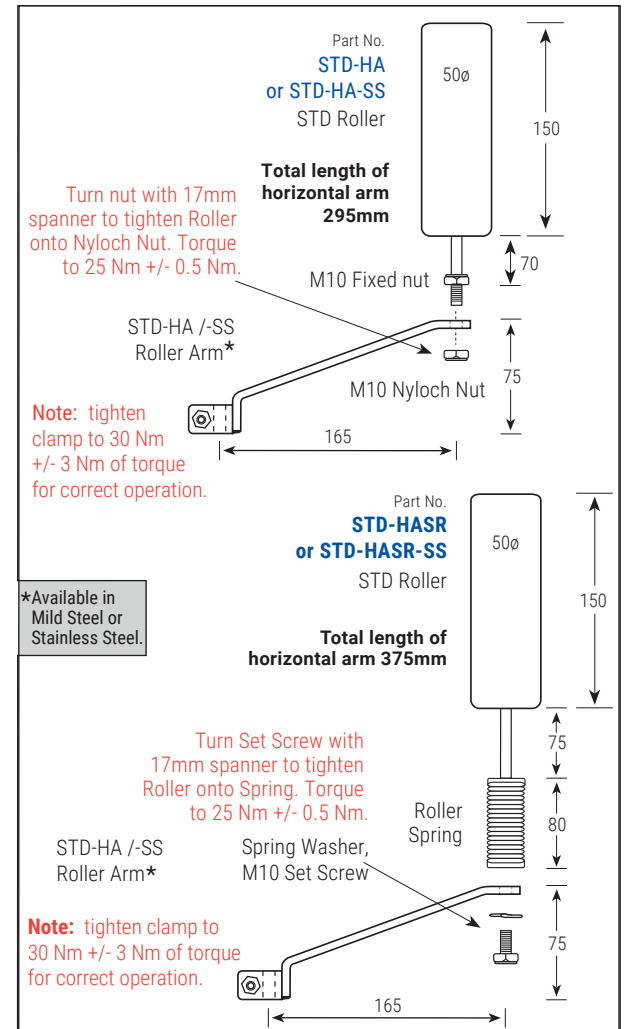
Part No's: STD-HA /SS; STD-HASR /SS;

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HA Rollers are used for large items on conveyor

Recommended Belt Drift Switches to use with STD - HA/SS or HASR/SS

Part No's: STD-P/SD-D /-?... STD-P/SD-D-K /-?...



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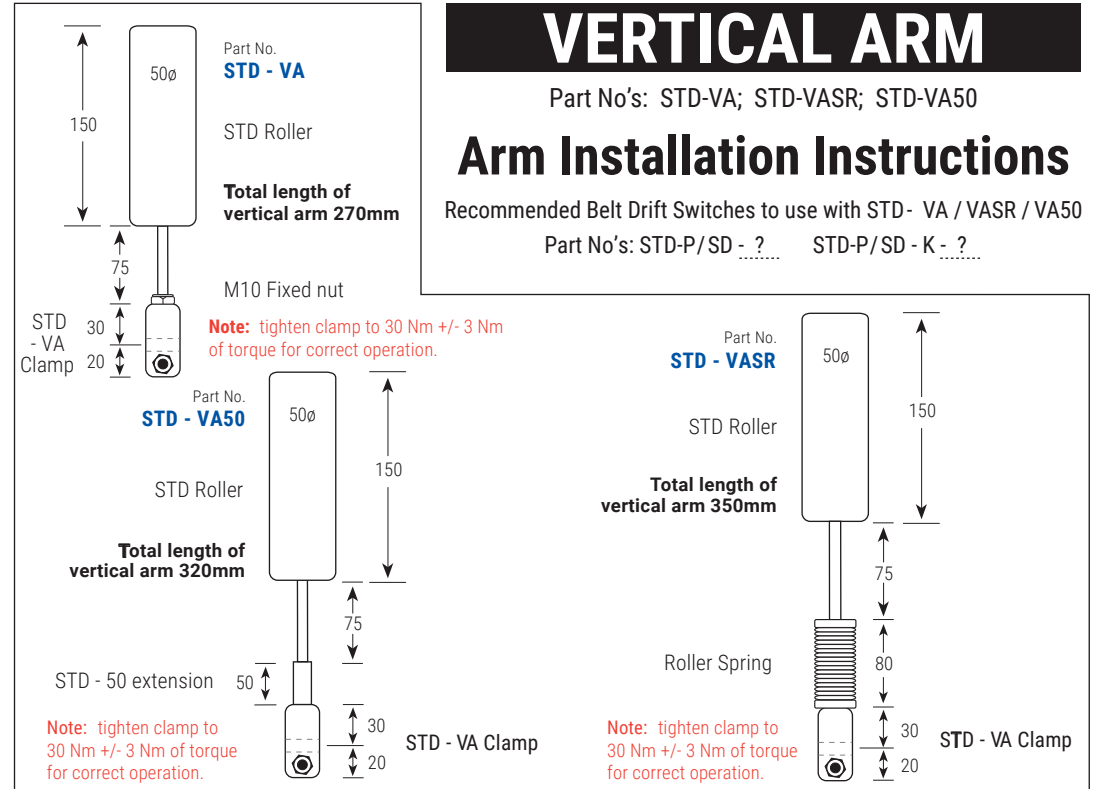
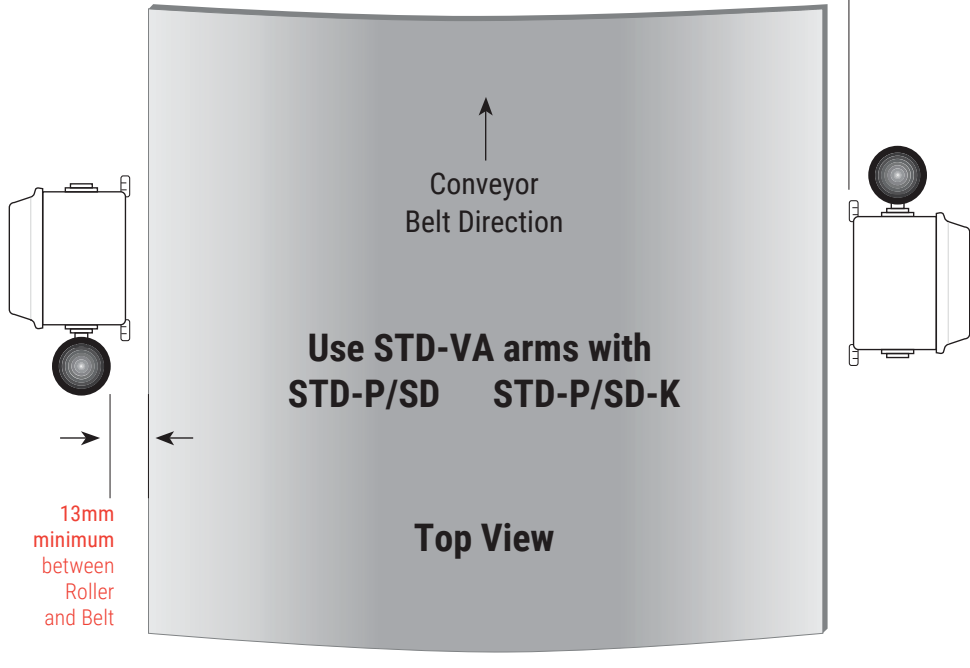
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# SAFE-T-DRIFT

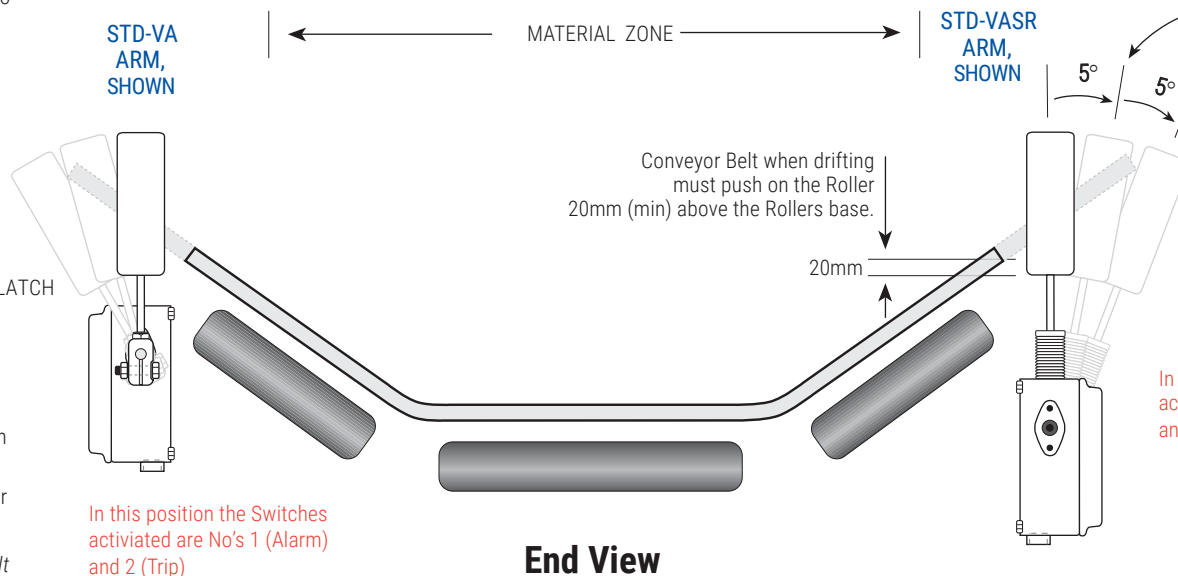
7mm minimum from the belt edge to the under side of the Switch



The roller arm has the ability to rotate 90° from its set resting position in both directions, so that you can get maximum belt drift travel and maintain switch & roller reliability. The arm returns to its set resting position when the belt returns to its normal running position.

Using the Part No. STD-P/SD-LATCH the arm can be preset to a position where the belt drifts and trips the switch, and the arm rotates over to the 90 position and only returns when it is physically pushed back to position and then the conveyor may be restarted.

Eg. Use the roller arm as a Belt Drift Switch visual flag indicator



In this position the Switches activated are No's 1 (Alarm) and 2 (Trip)

**FACTORY SET LIMIT SWITCH ALARM POSITION**  
(ALARM LIMIT SWITCH ON)

(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

**FACTORY SET LIMIT SWITCH TRIP POSITION**  
(TRIP LIMIT SWITCH ON)

(Factory Setting may be changed after Switch Installation to required position. See Micro Switch Installation Instructions for adjustment)

Limit switch trip position to be set anywhere before the Conveyor Belt rides over the top of the roller, or the belt contacts any fixed structure.

In this position the Switches activated are No's 1 (Alarm) and 2 (Trip)

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